

FOREST CONTROL

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132

CONTINUOUS INVENTORY

"Today I have grown taller from walking
with the trees."

...Karle Wilson

Milwaukee, Wis. March, 1965 No. 132

THE DMSO MYSTERY

The potential versatility of the chemical caught the eye of Edward H. Nunn, general manager of Crown Zellerbach's chemical products division in Camas, Wash. He put a young researcher, Robert J. Herschler, to work on it. Herschler tried DMSO* as a solvent for insecticide on plants and trees. "The chemical," he says, "went all through the plant as if the structure was a sieve." There were other strange effects. With DMSO there was a tremendous increase in the flow of water up the stem, and Herschler was able to combine DMSO with fungicides, which were taken up by the roots of the tree and distributed rapidly throughout the trunk and branches, eliminating tenacious spores that had been killing the tree. Trees nearly dead of what is known as "vascular decline" were brought to life again by DMSO, which seemed to unclog the channels through which the tree gets its nourishment from the roots. Tree wounds also were healed quickly when treated with applications of DMSO.

From "THE GREAT DMSO MYSTERY"

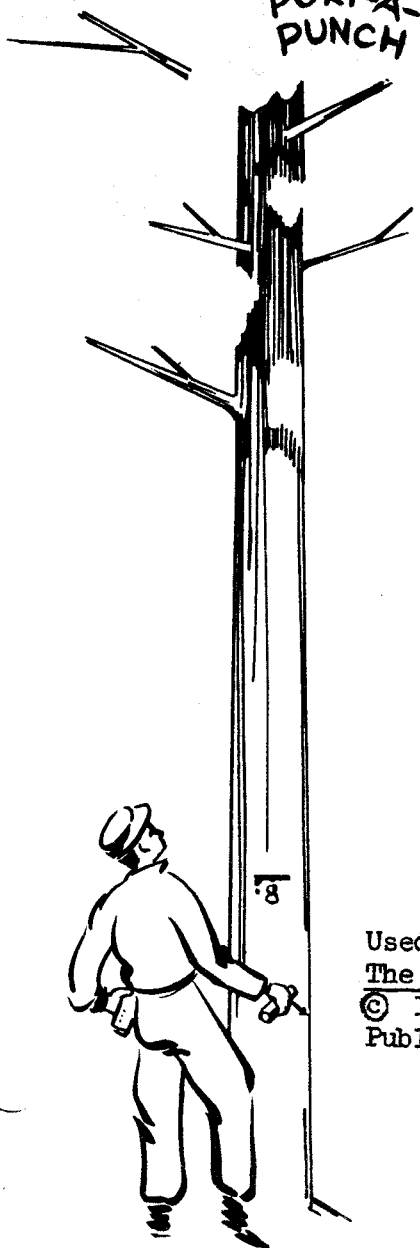
By BILL DAVIDSON

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* dimethyl sulfoxide

The Forester

CHARTS
FLOW PLANS
PAINT NUMBERED
TREES
PERMANENT
SAMPLES
TIMBER
BOOKKEEPING
UNIT
RECORDS
THE DIAMETER
TAPE
TRIAL
BALANCE
PORT-A-
PUNCH



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SITE INDEX CURVES

All indices of site quality are important to forest management. Of the multitude of factors that make up site quality, the variation in height growth due to variation in the site factors has been found to be clearly correlated for a single tree species. Site Index - total height at a given age - is a single, quantitative expression of the result of the many factors that make up site quality.

In the Eastern United States, site index is generally based on the height attained by the average dominant, or dominant and codominant trees, at the age of 50 years. Sometimes, because the growth rate or life span of the species will not permit the basis to be 50 years, site index is based on an age less than or greater than 50 years. For example, site index has been expressed for eastern cottonwood at 25 years, eastern spruces at 65 years and Douglas fir at 100 years.

For many years, tables and graphs have been prepared showing the site index for a species in a localized area. This restriction is necessary when a very close correlation of height growth to site factors is desired. In some forestry work, such closeness is not necessary. Sometimes site index data is not available in publications, nor is there time to develop data obtained from local trees. Although site index factors may be used only infrequently, when they are needed it is often on short notice.

With these problems in mind, we attempted to compare and mold the work of different foresters into a single set of site index curves under one cover that would be useful over a wide area.

Not all the data available for a particular species fit well into one set of curves. Limitations created by exacting site factors tended to keep some particular data out of the norm. Any data that did not fit within five feet of height with another set was not included.

These curves may not fit perfectly in all situations. They are only as accurate in application as the original data on which they were based. However, the curves will enable a forester to come up with a good estimate of site index from measurements taken on trees, in good and well stocked stands, which are more or less than the site index age base shown on the table for a particular species.

The sources of information used are shown at the bottom of each table. Some existing data may have been overlooked that would add new species to the list, widen the range of use, or strengthen the present curves. Any such data, if made available, would be considered for possible revisions of the curves. Constructive comments are invited.

Frederick E. Hampf
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